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Atty. ref. P03096US2A  
(8/001d0nUSc)

## REMARKS

Claims 1-3, 9-10 and 21-35 are pending. Because the instant application now includes 20 total claims, of which only two – claims 1 and 9 – are independent, no additional claim fee is believed to be due at this time.

Claim 1 has been amended to insert a missing conjunction between steps a and b.

Claims 21-35 correspond substantially to claims 4-8 and 11-20, many of which included multiple dependencies, that were canceled at the time of national stage entry.<sup>1</sup> Based on the fact that substantially similar claims were present at the time of national stage entry, no new matter will be introduced by entry of claims 21-35 and, further, no specific reference to textual support is believed necessary.

Claims 1-3 and 9-10 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,811,479 (hereinafter "US'479"). Because the 10/28 Action appears to have misconstrued the teaching of US'479, Applicants traverse this rejection and respectfully request that it be withdrawn.

Reproduced below are lines 13-25 of column 7 from US'479:

Another object of the present invention is a new process of preparing diene rubber compositions comprising as reinforcing filler carbon black or a mixture of carbon black and silica, characterized by incorporating by thermo-mechanical working into an elastomer comprising at least one functionalized diene polymer bearing at the chain end a silanol function or a polysiloxane block having a silanol end, or modified along the chain by silanol functions at least one organosilane compound comprising an amine or imine function in accordance with general formula I.

The incorporating of the organosilane compound of formula I is effected in any suitable device, for instance in an internal mixer or an extruder in a manner known per se. 25

While the syntax of the first paragraph is not a model of idiomatic English,<sup>2</sup> the practical effect of the teaching is that the formula I compounds (which include amine or imine functionality) are "incorporate[ed] by thermo-mechanically working into an elastomer (sic – composition or elastomeric composition would make more sense) comprising at least one

<sup>1</sup> In Article 19 amendments submitted to the International Bureau of WIPO on 19 April 2006, originally presented claims 1-16 in the international application were canceled and replaced with newly presented claims 1-20. Accordingly, in the accompanying Listing of Claims, claims 2-3 and 9-10 are labeled as "previously presented" so as to comply with current USPTO practice.

<sup>2</sup> US'479 appears to be an English language translation of a French priority document and, accordingly, some unusual phrasing and/or placement of clauses probably is to be expected.

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functionalized diene polymer ...." In other words, US'479 teaches that *the formula I compounds are mixed with a functionalized polymer.*

No reaction between the formula I amine/imine compounds and the polymer is taught. This is reinforced by lines 10-30 of column 2:

10 The Applicant Company has surprisingly discovered that  
it is possible, without affecting the other properties, to  
greatly decrease the hysteresis of diene rubber compositions  
which can be used in the manufacture of tires, in particular  
treads, comprising as filler, carbon black or a mixture of  
carbon black and silica, by the use of at least one function-  
15 alized diene polymer bearing on the chain end a silanol  
function or a polysiloxane block having a silanol end, or  
modified along the chain by silanol functions with at least  
one organosilane compound comprising one or more amine  
or imine functions.  
20 The invention relates to a sulfur-vulcanizable rubber  
composition comprising at least one functionalized or mod-  
ified diene polymer and carbon black or a mixture of carbon  
black and silica as reinforcing filler, characterized by the fact  
25 that the diene polymer is a functionalized polymer bearing  
either at the chain end a silanol function or a polysiloxane  
block having a silanol end, or modified along the chain by  
silanol function, and by the fact that it comprises at least one  
organosilane compound having one or more amine or imine  
30 functions of general formula I:



The two denoted portions of this section show that the organosilane compound that includes amine or imine functionality is a separate component of the rubber composition and not a portion of the functionalized polymer, as is required in both claims 1 and 9.

The lack of reaction between the formula I compounds and the functionalized polymer also can be seen in the examples. In Example 1, a functionalized polymer (SBR-A) is synthesized; see cols. 8-9. Some of this interpolmer is thermo-mechanically mixed with aminopropyltrimethoxysilane (a formula I compound) in Example 2. No reaction between the silane and the functionalized polymer can occur based on the non-living nature of the interpolmer; c.f., page 7 of the as-filed specification.

For at least the foregoing reasons, US'479 does not teach<sup>3</sup> the claimed method of making a functionalized polymer (claim 1 and claims dependent therefrom) or functionalized

<sup>3</sup> While an obviousness rejection was not included in the 10/28 Action, Applicants note that the advantages taught to be obtained in US'479 all require thermo-mechanical mixing of the polymer and amine/imine organosilane. Modification of US'479 to require reaction of a living version of the polymer with an amine-containing compound would, concomitantly, be expected to remove all the advantages obtained from the mixing method. Accordingly, an ordinarily skilled would not have been motivated to make such a modification.

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polymer (claim 9 and claims dependent therefrom). Reconsideration and withdrawal of this rejection is respectfully requested.

Because the § 102(b) rejection over US'479 is the only rejection of claims 1-3 and 9-10 (and because new claims 21-35 add further patentably distinct features), the present application is submitted to be in a condition for allowance.

This responsive submission is being made within three months of the mailing date of the 10/28 Action. Accordingly, no fees are believed necessary for its entry and consideration but, if any fee is or becomes due, it can be charged to Deposit Account No. 06-0925; any overpayments can be credited to that same account.

Questions concerning this submission should be directed to the undersigned. However, the correspondence address of record remains the same.

Respectfully submitted,



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